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# PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

*Timothy A. Spahr*

U.S. Serial No. 10/776,396

Filed February 11, 2004

Docket No. 1747 (TI-03-12)

For: FUEL CONTAINER HAVING  
CONTIGUOUS UNBONDED  
POLYACETAL/POLYOLEFIN LAYERS :

Examiner: UNKNOWN

Group Art Unit: 3727

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

### INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.56, 1.97 AND 1.98

Sir:

Applicants submit herewith patents, publications, and other information of which they are aware, which they believe may be material, as defined in 37 C.F.R. 1.56(b), to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. 1.56(a). While information referred to in this Information Disclosure Statement may be material pursuant to 37 C.F.R. 1.56(b), the filing of this Information Disclosure Statement is not intended to, pursuant to 37 C.F.R. 1.97(h), constitute an admission that any patent, publication or other information referred to is, or is considered to be, material to the patentability of this invention. Pursuant to 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information exists.

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☐ This Information Disclosure Statement is filed after the period set forth in 37 C.F.R. 1.97(b), but is believed to be filed before the mailing date of a final action under §1.311, whichever occurs first.

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- ☐ (3) This Information Disclosure Statement is accompanied by a transmittal letter in which payment of the fee set forth in §1.17(p) and required by 37 C.F.R. 1.97 (c) is authorized.

**Patents**

1. U.S. Patent No. 2,072,069, issued February 23, 1937, entitled "Composition of Matter for Coating Industry", of *Ellis*;
2. U.S. Patent No. 2,998,409, issued August 29, 1961, entitled "Polyoxymethylene Carboxylates of Improved Thermal Stability", of *Dal Nogare et al.*;
3. U.S. Patent No. 2,989,506, issued June 20, 1961, entitled "Catalytic Polymerization", of *Hudgin et al.*;
4. U.S. Patent No. 3,027,352, issued March 27, 1962, entitled "Copolymers", of *Walling et al.*;
5. U.S. Patent No. 3,147,234, issued September 1, 1964, entitled "Modified Oxymethylene Polymers", of *Polly, Jr.*; (English language equivalent of French Publication 1,221,148);
6. U.S. Patent No. 3,210,318, issued October 5, 1965, entitled "Oxymethylene Polymers Stabilized With Epoxides", of *Dolce et al.*;
7. U.S. Patent No. 3,219,623, issued November 23, 1965, entitled "Stabilization of Oxymethylene Copolymers With an Hydroxy Containing Reactant", of *Berardinelli*;
8. U.S. Patent No. 3,337,507, issued August 22, 1967, entitled "Process for Making High Molecular Weight Copolymers of Trioxane and Polyformal", of *Gutweiler et al.*;
9. U.S. Patent No. 4,405,547, issued September 20, 1986, entitled "Method of Coextruding Diverse Materials", of *Koch et al.*;
10. U.S. Patent No. 4,460,534, issued July 17, 1984, entitled "Two-Shot Injection Molding", of *Boehm et al.*;
11. U.S. Patent No. 5,096,964, issued March 17, 1992, entitled "Blow Moldable Polyacetal Compositions", of *Subramanian*;
12. U.S. Patent No. 5,458,839, issued October 17, 1995, entitled "Method of Blow or Extrusion Molding Polyoxymethylene Resin", of *Murao et al.*;
13. U.S. Patent No. 5,476,120, issued December 19, 1995, entitled "Lacquer-Resistant Fuel-Line Hose", of *Brunnhofner*;
14. U.S. Patent No. 5,567,491, issued October 22, 1996, entitled "Hydrocarbon Vapor-Impervious Containers and Process for Producing Them", of *Vezzoli et al.*;
15. U.S. Patent No. 5,891,373, issued April 6, 1999, entitled "Process of Making a Multi-Layer Tube", of *Hunter*;

16. U.S. Patent No. 5,929,195, issued July 27, 1999, entitled "Process for Producing Branched or Crosslinked Polyacetal Resin", of *Kawaguchi et al.*;
17. U.S. Patent No. 6,384,179, issued May 7, 2002, entitled "Polyacetal Resin Composition", of *Tanimura et al.*

### **Publications**

1. U.S. Patent Application Publication No. 2001/0034407 A1, published October 25, 2001, entitled "Thermoplastic Resin Integrated Structure", of *Ariyasu et al.* and
2. U.S. Patent Application Publication No. 2002/0187291 A1, published December 12, 2002, entitled "Long Solidified Hollow Thermoplastic Articles", of *Phillippos*.

### **Articles**

1. Kirk-Othmer, *Encyclopedia of Chemical Technology*, Third Edition (1980), Volume 10, p. 216, Wiley-Interscience Publication, John Wiley & Sons, New York; and
2. Acetal Resins", T.J. Dolce and John A. Grates, *Encyclopedia of Polymer Science and Engineering*, Second Edition (1985), Volume 1, pp. 46-61, John Wiley & Sons, New York.

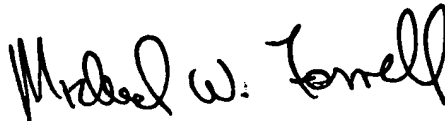
### **Foreign Documents**

1. Japanese Patent JP-A-9248851 (together with English language abstract), published September 22, 1997, entitled "Multilayered Blow Molded Product of Polyacetal Resin and Its Production" of *Kenji et al.*;
2. Japanese Patent JA-A-2000-8981 (together with English language abstract), published January 11, 2000, entitled "Fuel Shutoff Valve", of *Masayuki et al.*;
3. Japanese Kokai Sho 42-22065, published October 30, 1967, of *Yamaguchi et al.* (no translation);
4. English language abstract of JP2001031732, published February 6, 2001, entitled "Novel Polyacetal Resin" of *Kuniaki et al.*;
5. English language abstract of JP9324106, published December 16, 1997, entitled "Polyacetal Resin Composition and Molded Article", of *Kuniaki et al.*;
6. English language abstract of JP9278983, published October 28, 1997, entitled "Polyacetal Resin Composition and Molded Product Thereof", of *Kuniaki et al.*;

7. English language abstract of JP9241476, published September 16, 1997, entitled "Polyacetal Resin Composition and Molded Product Therefrom", of Kuniaki et al.;
8. English language abstract of JP8012734, published January 16, 1996, entitled "Polyacetal Copolymer Resin for Blow Molding, Blow Molded Article, and Production Thereof", of Kuniaki et al.;
9. English language abstract of JP7195496, published August 1, 1995, entitled "Hollow Molded Product Made of Polyacetal Resin", of Akihide;
10. English language abstract of JP4163022, published June 8, 1992, entitled "Polyacetal Resin Gasoline Tank", of Kazuhiko et al.;
11. English language abstract of JP2002155123, published May 28, 2002, entitled "Process of Continuous Polymerization of Crosslinked Polyacetal Resin", of Kuniaki;
12. English language abstract of JP2001011143, published January 16, 2001, entitled "Polyoxymethylene Copolymer, Its Production and Analysis Thereof", of Eiji et al.;
13. English language abstract of JP2001011144, published January 16, 2001, entitled "Polyoxymethylene Copolymer and Its Production", of Katsuhira et al.;
14. English language abstract of JP11255853, published September 21, 1999, entitled "Preparation of Polyacetal Resin", of Kuniaki et al.;
15. English language abstract of JP9327855, published December 22, 1997, entitled "Polyacetal Resin Filler Neck Pipe", of Kenji;
16. English language abstract of JP9151318, published June 10, 1997, entitled "Hollow Molding Material, Its Production and Raw Material for Hollow Molding Material", of Koji et al.;
17. English language abstract of JP6328490, published November 29, 1994, entitled "Polyacetal Resin Molding", of Kimihiro et al.;
18. English language abstract of JP4193522, published July 13, 1992, entitled "Polyacetal Resin Hollow Molded Body", of Kosuke et al.;
19. English language abstract of JP9241476, published September 16, 1997, entitled "Polyacetal Resin Composition and Molded Product Therefrom" of Kuniaki et al.;
20. English language abstract of JP9278983, published October 28, 1997, entitled "Polyacetal Resin Composition and Molded Product Thereof", of Kuniaki et al.;
21. English language abstract of EP1401961, published March 31, 2004, entitled "Long Solidified Hollow Thermoplastic Articles", of *Philippos et al.*; and

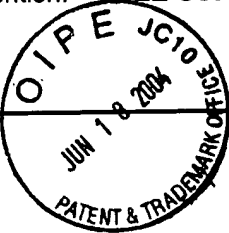
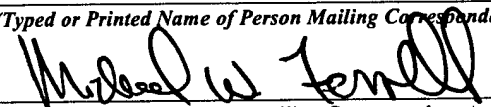
22. English language abstract of WO0063291, published October 26, 2000, entitled "Use of Polyoxymethylene Moulding Materials", of *Plachetta et al.*

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael W. Ferrell". The signature is written in a cursive, flowing style.

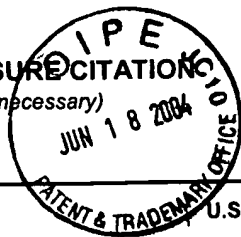
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June 16, 2004

<b>CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)</b>			Docket No. 1747 (TI-03-12)	
Applicant(s): Timothy A. Spahr				
Application No. 10/776,396	Filing Date February 11, 2004	Examiner UNKNOWN	Customer No. 40256	Group Art Unit 3727
Invention: <b>FUEL CONTAINER HAVING CONTIGUOUS UNBONDED POLYACETAL/POLYOLEFIN LAYERS</b>				
				
<p>I hereby certify that this <u>IDS, w/references, PTO-1449 &amp; return postcard</u> <i>(Identify type of correspondence)</i></p> <p>is being deposited with the United States Postal Service as first class mail in an envelope addressed to:</p> <p>Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on <u>June 16, 2004</u> <i>(Date)</i></p> <p style="text-align: right;"><u>Michael W. Ferrell</u> <i>(Typed or Printed Name of Person Mailing Correspondence)</i></p> <p style="text-align: right;"> <i>(Signature of Person Mailing Correspondence)</i></p> <p style="text-align: center;">Note: Each paper must have its own certificate of mailing.</p> <div style="border: 1px solid black; height: 250px; width: 100%;"></div>				

# INFORMATION DISCLOSURE CITATIONS

(Use several sheets if necessary)



ATTY DOCKET NO.

1747 (TI-03-12)

APPLICATION NO.

10/776,396

APPLICANT(S)

Timothy A. Spahr

FILING DATE

February 11, 2004

GROUP ART UNIT

3727

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2,072,069	2/23/37	Ellis	134	17	
	2,989,506	6/20/61	Hudgin et al.	260	67	
	2,998,409	8/29/61	Nogare et al.	260	67	
	3,027,352	3/27/62	Walling et al.	260	67	
	3,147,234	9/1/64	Polly, Jr.	260	67	

## U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2001/0034407 A1	10/25/01	Ariyasu et al.	525	57	
	2002/0187291 A1	12/12/02	Philippoz et al.	428	36.4	

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	Japanese 9248851	9/22/97	Japan	B29C	49/22	✓	
	Japanese 200008981	1/11/00	Japan	F02M	37/00	✓	
	Japanese 42-22065	10/30/42	Japan	26C	118		✓

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Kirk-Othmer, Encyclopedia of Chemical Technology, Third Edition (1980), Volume 10, p. 216, Wiley-Interscience Publication, John Wiley & Sons, New York; and Acetal Resins", T.J. Dolce and John A. Grates, Encyclopedia of Polymer Science and Engineering, Second Edition (1985), Volume 1, pp. 46-61, John Wiley & Sons, New York
	English language abstracts of the following Japanese Patents : JP2001031732; JP9324106; JP9278983; JP9241476; JP8012734; JP7195496; JP4163022; JP2002155123; JP2001011143; JP2001011144; JP11255853; JP9327855; JP9151318; JP6328490; and JP4193522, JP9241476 and JP9278983
	English language abstracts of EP1401961 and WO0063291

EXAMINER

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<b>INFORMATION DISCLOSURE CITATION</b> <i>(Use several sheets if necessary)</i>				ATTY DOCKET NO. 1747 (TI-03-12)		APPLICATION NO. 10/776,396	
				Timothy A. Spahr			
				FILING February 11, 2004		GROUP ART 3727	

U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		3,210,318	10/5/65	Dolce et al.	260	45.8	
		3,219,623	11/23/65	Berardinelli	260	45.95	
		3,337,507	8/22/67	Gutweiler and et al.	260	67	
		4,405,547	9/20/83	Koch et al.	264	171	
		4,460,534	7/17/84	Boehm et al.	264	246	

U.S. PATENT APPLICATION PUBLICATIONS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>			

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Timothy A. Spahr

FILING  
February 11, 2004GROUP ART  
3727**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,096,964	3/17/92	Subramanian	525	57	
	5,458,839	10/17/95	Murao et al.	264	177.1	
	5,476,120	12/19/95	Brunnhofer	138	137	
	5,567,491	10/22/96	Vezzoli et al.	428	35.7	
	5,891,373	4/6/99	Hunter	264	104	

**U.S. PATENT APPLICATION PUBLICATIONS**

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*


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3727**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,929,195	7/27/99	Kawaguchi et al.	528	233	
	6,384,179	5/7/0p2	Tanimura et al.	528	230	

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